

What is claimed is:

1. A method for logically remapping the commands to logical buttons for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, said method comprising:

determining an orientation for the display device; and

logically remapping the commands to the logical buttons based on the orientation of the display device.
2. The method of claim 1 wherein the display device is a visual display device.
3. The method of claim 1 wherein the display device is a non-visual display device.
4. The method of claim 1 wherein the display device is one from the group comprising: visual display device, audio display device, and tactile display device.
5. The method of claim 1 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs automatically.
6. The method of claim 1 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs in response to user input.
7. The method of claim 1 wherein, regarding the step of determining the orientation display, the orientation is determined based on the orientation of a display on a display device.

8. The method of claim 6 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs automatically.

9. The method of claim 1 wherein, if the navigational control device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons.

10. The method of claim 1 wherein, for navigational control device that are symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the display devices original orientation.

11. The method of claim 10 wherein:

if the display device is rotated one quarter to the right, the commands for UP and DOWN are transposed;

if the display device is rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed; and

if the display device is rotated three-quarters to the right, then the commands for PREV and NEXT are transposed.

12. A user interface system attached to a display device, said system implementing the method of claim 1 for logically remapping the commands to logical buttons for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, said system comprising;

a subsystem for determining an orientation for the display device; and

a subsystem for logically remapping the commands to the logical buttons based on the orientation of the display device.

13. The system of claim 12 wherein the display device is a visual display device.
14. The system of claim 12 wherein the display device is a non-visual display device.
15. The system of claim 12 wherein the display device is one from the group comprising: visual display device, audio display device, and tactile display device.
16. The system of claim 12 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs automatically.
17. The system of claim 12 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs in response to user input.
18. The system of claim 12 wherein, regarding the step of determining the orientation display, the orientation is determined based on the orientation of a display on a display device.
19. The system of claim 18 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs automatically.
20. The system of claim 12 wherein, if the navigational control device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons.
21. The system of claim 12 wherein, for navigational control device that are symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super

dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the display devices original orientation.

22. The system of claim 21 wherein:

if the display device is rotated one quarter to the right, the commands for UP and DOWN are transposed;

if the display device is rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed; and

if the display device is rotated three-quarters to the right, then the commands for PREV and NEXT are transposed.

23. A computer-readable medium having computer-readable instructions for a method of logically remapping the commands to logical buttons for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, said method comprising;

determining an orientation for the display device; and

logically remapping the commands to the logical buttons based on the orientation of the display device.

24. The computer-readable instructions of claim 23 wherein the display device is a visual display device.

25. The computer-readable instructions of claim 23 wherein the display device is a non-visual display device.

26. The computer-readable instructions of claim 23 wherein the display device is one from the group comprising: visual display device, audio display device, and tactile display device.

27. The computer-readable instructions of claim 23 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs automatically.

28. The computer-readable instructions of claim 23 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs in response to user input.

29. The computer-readable instructions of claim 23 wherein, regarding the step of determining the orientation display, the orientation is determined based on the orientation of a display on a display device.

30. The computer-readable instructions of claim 28 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs automatically.

31. The computer-readable instructions of claim 23 wherein, if the navigational control device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons.

32. The computer-readable instructions of claim 23 wherein, for navigational control device that are symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the display devices original orientation.

33. The computer-readable instructions of claim 32 wherein:

if the display device is rotated one quarter to the right, the commands for UP and DOWN are transposed;

if the display device is rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed; and

if the display device is rotated three-quarters to the right, then the commands for PREV and NEXT are transposed.

34. A hardware control device for a method of logically remapping the commands to logical buttons for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, said method comprising;

determining an orientation for the display device; and

logically remapping the commands to the logical buttons based on the orientation of the display device.

35. The hardware control device of claim 34 wherein the display device is a visual display device.

36. The hardware control device of claim 34 wherein the display device is a non-visual display device.

37. The hardware control device of claim 34 wherein the display device is one from the group comprising: visual display device, audio display device, and tactile display device.

38. The hardware control device of claim 34 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the

display device, then the logical mapping of the commands to the logical buttons occurs automatically.

39. The hardware control device of claim 34 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs in response to user input.

40. The hardware control device of claim 34 wherein, regarding the step of determining the orientation display, the orientation is determined based on the orientation of a display on a display device.

41. The hardware control device of claim 39 wherein, if the display on the display device is changed to a different orientation, presumably to match a change in a physical orientation of the display device, then the logical mapping of the commands to the logical buttons occurs automatically.

42. The hardware control device of claim 34 wherein, if the navigational control device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons.

43. The hardware control device of claim 34 wherein, for navigational control device that are symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the display devices original orientation.

44. The hardware control device of claim 43 wherein:

if the display device is rotated one quarter to the right, the commands for UP and DOWN are transposed;

if the display device is rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed; and

if the display device is rotated three-quarters to the right, then the commands for PREV and NEXT are transposed.

45. A hardware control device comprising means for logically remapping the commands to logical buttons for a navigational device coupled to a physically rotate-able display device having a display.

46. A system for increasing user interface effectiveness for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, wherein said navigational device is rotationally movable separate from the display device.

47. The system of claim 46 wherein the navigational device is capable of being rotated in the opposite direction of the display device when the display device is being rotated.

48. The system of claim 46 wherein the orientation of the navigational device is capable of being rotated independently of the orientation of the display device.

49. A method for increasing user interface effectiveness for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, and said navigational device being rotationally movable separate from the display device, said method comprising the rotation of said navigational device.

50. The method of claim 49 wherein the navigational device is rotated in the opposite direction of the display device when the display device is being rotated.
51. The method of claim 49 wherein the orientation of the navigational device is rotated independently of the orientation of the display device.
52. A computer-readable medium having computer-readable instructions for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, wherein said navigational device is rotationally movable separate from the display device.
53. The computer-readable medium of claim 52 wherein the navigational device is capable of being rotated in the opposite direction of the display device when the display device is being rotated.
54. The computer-readable medium of claim 52 wherein the orientation of the navigational device is capable of being rotated independently of the orientation of the display device.
55. A hardware control device for increasing user interface effectiveness comprising a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, wherein said navigational device is rotationally movable separate from the display device.
56. The hardware control device of claim 55 wherein the navigational device is capable of being rotated in the opposite direction of the display device when the display device is being rotated.
57. The hardware control device of claim 55 wherein the orientation of the navigational device is capable of being rotated independently of the orientation of the display device.

58. A method for increasing user interface effectiveness for a navigational device coupled to a physically rotate-able display device having a display, said navigational device having logical buttons and associated commands for such logical buttons, said method for said navigational device comprising means by which said navigational device can be rotated separate from the display device.

59. The method of claim 58 wherein the navigational device comprises means for being rotated in the opposite direction of the display device when the display device is being rotated.

60. The method of claim 58 wherein the orientation of the navigational device comprises means for being rotated independently of the orientation of the display device.